

## **NOTES**

- 1) MANHOLE COVER SHALL CONFORM TO MN/DOT S.P. 4020 J.
- (2) MANHOLE BASE SHALL CONFORM TO MN/DOT S.P. 4011 E.
- (3) REFER TO PLANS AND S.D.P. 1–11 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
- (4) ADJUSTING RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED.
- 5. STRUCTURE SHALL BE PRECAST CONCRETE.
- 6 REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN EACH DIRECTION.

- 7) STEPS ARE SPACED AT 16" O.C. MAX. AND SHALL CONFORM TO MN/DOT S.P. 4180 J. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE.
- (8) ALL JOINTS TO BE GASKETED. REFER TO MN/DOT SPEC. 3726.
- (9) PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MINIMUM SLOPE. MINIMUM CONCRETE THICKNESS AT LOWEST INVERT SHALL BE 1 1/2".
- (10) WATERTIGHT SEAL PER MN/DOT S.P. 4007 C. REQUIRED FOR SANITARY SEWER USE.

DEPARTMENT OF PUBLIC WORKS
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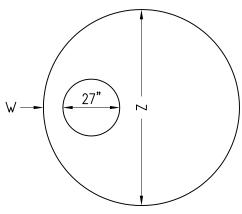
STRUCTURE TYPE 4 (XX in.)

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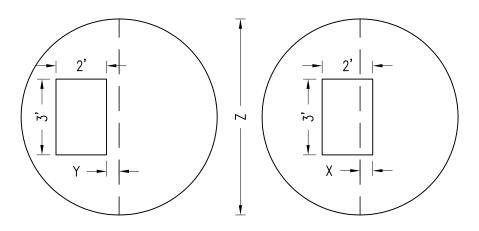
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SEE SHEET 2 FOR MANHOLE DIMENSIONS



MANHOLE TOP SLAB



## ALTERNATE TOP SLAB FOR MANHOLE

| MH TOP SLAB |    |           |      | MANHOLE DIMENSIONS |            |      |     |     | MAX. PIPE SIZE |     |
|-------------|----|-----------|------|--------------------|------------|------|-----|-----|----------------|-----|
| W           | Χ  | Υ         | Z    | Α                  | В          | С    | D   | E   | 135°-180°      | 90° |
| 6"          | 9" | 1         | 58"  | 48"                | 5 <b>"</b> | 64"  | 6"  | 6"  | 27"            | 18" |
| 6"          | 6" | ı         | 65"  | 54"                | 5.5"       | 72"  | 8"  | 8"  | 33 <b>"</b>    | 21" |
| 7"          | 3" | ı         | 72"  | 60"                | 6"         | 78"  | 8"  | 8"  | 36 <b>"</b>    | 24" |
| 7"          | 0" | ı         | 79"  | 66"                | 6.5"       | 85"  | 8"  | 8"  | 42"            | 30" |
| 8"          | ı  | <b>3"</b> | 86"  | 72"                | 7"         | 92"  | 8"  | 8"  | 42"            | 33" |
| 8"          | ı  | 6"        | 93"  | 78"                | 7.5"       | 100" | 8"  | 8"  | 48"            | 36" |
| 9"          | ı  | 9"        | 100" | 84"                | 8"         | 106" | 8"  | 8"  | 54"            | 42" |
| 9"          | ı  | 12"       | 107" | 90"                | 8.5"       | 114" | 8"  | 8"  | 60"            | 42" |
| 9"          | ı  | 15"       | 114" | 96"                | 9"         | 120" | 8"  | 8"  | 60"            | 42" |
| 9"          | _  | 18"       | 121" | 102"               | 9.5"       | 127" | 8"  | 8"  | 60"            | 48" |
| 10"         |    | 21"       | 126" | 108"               | 10"        | 132" | 9"  | 12" | 60"            | 54" |
| 11"         | _  | 24"       | 140" | 120"               | 10"        | 146" | 12" | 12" | 60"            | 60" |

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STRUCTURE TYPE 4 (XX in.)
MANHOLE DIMENSIONS

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